



AN ISO 9001 : 2008 COMPANY & NABL ACCREDITED LABORATORY AS PER ISO/IEC 17025:2005

4, 7TH MAIN MALLESWARAM, BANGALORE - 3

Certificate No.: T- 4358

TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID : CP-2017-02-04-01 Date: 11-02-2017
Customer : Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Bangalore.
Address : Byatarayanapura Sub Division, BBMP, Bangalore.
Project Name : Improvements to Roads and Drains at Hemanna Layout, Kogilu in Ward No.05, Byatarayanapura Sub Division.
Agency : Sri.Gopi Reddy, No:03, first cross, first main, Ramachandrappa layout, Arebic college post, erannapalya, Bangalore - 560045
Customer's Reference : EE/BTP/BBMP/E-PMT/201/2015-16
Source of Sample : Sample supplied by Agency
Sample Condition : Satisfactory
Date of Receipt : 04-02-2017
Sample ID No : 2017-02-04-01-01
Sample Type : Birla Super 53 grade
Reference to BIS codes : IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification ,
IS 4031 (Part 1,2 3,4,5, 6,11):1988
IS 4031 Part 1 DETERMINATION OF FINENESS BY DRY SIEVING, Clause 4.4
IS 4031 Part 2, Determination of Fineness by Blaine Air Permeability Method, Clause 5
IS 4031 Part 3, Determination of Soundness, Clause 5, Clause 6
IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5
IS 4031 Part 5, Determination of Initial & Final Setting Time, Clause 5
IS 4031 Part 6, Determination of Compressive Strength, Clause 6
IS 4031 Part 11, DETERMINATION OF DENSITY , Clause 6
Date of test : 04-02-2017

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	Fineness by dry sieving (%)	2.85	—
2	Finess by Air permeability method (m^2/kg , Min)	285.5	225 m^2/kg , Min
3	Density (gm/cc)	3.3	—
4	Standard Consistency (%)	28.0%	Not specified
5	Initial Setting time	195 minutes	Not less than 30 minutes

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4, 7TH MAIN MALLESWARAM, BANGALORE -3

Certificate No.: T- 4358

TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID : CP-2017-02-04-01

Date: 11-02-2017

Sample ID No : 2017-02-04-01-01

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
6	Final Setting time	255 minutes	Not more than 600 minutes
7	Soundness (Le Chatelier's Method)	2mm	Not more than 10 mm
8	Compressive Strength		
	3 Days	29.5N/mm ²	Not less than 27 N/mm ²
	7 Days	38.5N/mm ²	Not less than 37 N/mm ²
	28 Days	Test Report Date Due On 04-03-2017	Not less than 53 N/mm ²

Note:

The results pertain to the samples received and tested.

All information furnished by Customer/Representative

Any correction in the report will make this report invalid

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Samples will be disposed after 30 days from the date of issue of test certificate

Prepared by

Harshitha

OK was mas
20.02.17
20.02.17

FOR CIVIL Pro.



[Signature]

R KARTHIK RECHAN

Authorized Signatory

Quality Manager

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TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID : CP-2017-02-04-01 Date: 04-03-2017
Customer : Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Bangalore.
Address : Byatarayanapura Sub Division, BBMP, Bangalore.
Project Name : Improvements to Roads and Drains at Hemanna Layout, Kogilu in Ward No.05, Byatarayanapura Sub Division.
Agency : Sri.Gopi Reddy, No:03, first cross, first main, Ramachandrappa layout, Arebic college post, erannapalya, Bangalore - 560045
Customer's Reference : EE/BTP/BBMP/E-PMT/201/2015-16
Source of Sample : Sample supplied by Agency
Sample Condition : Satisfactory
Date of Receipt : 04-02-2017
Sample ID No : 2017-02-04-01-01
Sample Type : Birla Super 53 grade
Reference to BIS codes : IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification ,
IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5
IS 4031 Part 6, Determination of Compressive Strength, Clause 6
Date of test : 04-02-2017

Compressive Strength			
Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	3 Days	29.5N/mm ²	Not less than 27 N/mm ²
2	7 Days	38.5N/mm ²	Not less than 37 N/mm ²
3	28 Days	56.9N/mm ²	Not less than 53 N/mm ²

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Prepared by

Harshitha

OK with No 5
Date: 04-03-2017
20.05.2017

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R KARTHIK RECHAN

Authorized Signatory
Quality Manager

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4, 7TH MAIN MALLESWARAM, BANGALORE -3

Certificate No.: T-4358

TEST REPORT ON COARSE AGGREGATES

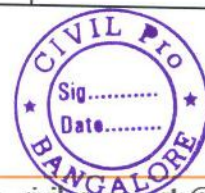
Lab ID : CP-2017-02-04-01 Date: 09-02-2017
Customer : Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Bangalore.
Address : Byatarayanapura Sub Division, BBMP, Bangalore.
Project Name : Improvements to Roads and Drains at Hemanna Layout, Kogilu in Ward No.05, Byatarayanapura Sub Division.
Agency : Sri.Gopi Reddy, No:03, first cross, first main, Ramachandrappa layout, Arebic college post, erannapalya, Bangalore - 560045
Customer's Reference : EE/BTP/BBMP/E-PMT/201/2015-16
Source of Sample : Sample supplied by Agency
Sample condition : Satisfactory
Date of Receipt : 04-02-2017
Sample ID No : 2017-02-04-01-02(b)
Sample Type : 40mm down size coarse aggregate
Reference to BIS codes : IS: 383:2016 (Specification for Coarse and fine Aggregates)
IS: 2386 :1963(Part - 1,3,4) RA2011
IS 2386 Part 1: Particle Size and Shape
IS 2386 Part 3: Specific gravity, Density, Voids, Water Absorption
IS 2386 Part 4: Mechanical Properties
Date of test : 04-02-2017

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 40MM DOWN COARSE AGGREGATE:

Total weight taken : 15000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	80 mm	0	0	0.0	100	100
2	40 mm	345	345	2.3	97.7	90-100
3	20 mm	4350	4695	31.3	68.7	30-70
4	10 mm	5300	9995	66.6	33.4	10-35
5	4.75 mm	4684	14679	97.9	2.1	0-5
6	Pan	321	15000	100.0	0	---

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Certificate No.: T-4358

TEST REPORT ON COARSE AGGREGATES

Lab ID : CP-2017-02-04-01
Sample ID No : 2017-02-04-01-02(b)

Date: 09-02-2017

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	12.3	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	10.7	
3	Specific Gravity	2.58	—
4	Bulk Density(Loose) (Kg/l)	1.49	—
5	Bulk Density(Compacted) (Kg/l)	1.53	—
6	Water Absorption(%)	0.25	—

Note:

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Prepared by

Harshitha

As per NABL
20.02.2017

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P. Karthik Rechan

R KARTHIK RECHAN

Authorized Signatory

Quality Manager



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4, 7TH MAIN MALLESWARAM, BANGALORE -3

Certificate No.: T-4358

TEST REPORT ON COARSE AGGREGATES

Lab ID : CP-2017-02-04-01 Date: 09-02-2017
Customer : Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Bangalore.
Address : Byatarayanapura Sub Division, BBMP, Bangalore.
Project Name : Improvements to Roads and Drains at Hemanna Layout, Kogilu in Ward No.05, Byatarayanapura Sub Division.
Agency : Sri.Gopi Reddy, No:03, first cross, first main, Ramachandrappa layout, Arebic college post, erannapalya, Bangalore - 560045
Customer Reference : EE/BTP/BBMP/E-PMT/201/2015-16
Source of Sample : Sample supplied by Agency
Sample Condition : Satisfactory
Date of Receipt : 04-02-2017
Sample ID No : 2017-02-04-01-02(a)
Sample Type/ Size : 20mm down size coarse aggregate
Reference to BIS codes : IS: 383:2016 (Specification for Coarse and fine Aggregates)
IS: 2386 :1963(Part - 1,3,4) RA2011
IS 2386 Part 1: Particle Size and Shape
IS 2386 Part 3: Specific gravity, Density, Voids, Water Absorption
IS 2386 Part 4: Mechanical Properties
Date of test : 04-02-2017

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM DOWN COARSE AGGREGATE:

Total weight taken : 5000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	40 mm	0	0	0	100	100
2	20 mm	120	120	2.4	97.6	90-100
3	10 mm	2300	2420	48.4	51.6	25-55
4	4.75 mm	2480	4900	98	2	0-10
5	Pan	100	5000	100	0	-

AS per no 5
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TEST REPORT ON COARSE AGGREGATES

Lab ID : CP-2017-02-04-01
Sample ID No : 2017-02-04-01-02(a)

Date: 09-02-2017

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	13.2	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	12.4	
3	Specific Gravity	2.68	—
4	Bulk Density(Loose) (Kg/l)	1.54	—
5	Bulk Density(Compacted) (Kg/l)	1.58	—
6	Water Absorption(%)	0.26	—
7	Aggregate crushing Value(%)	22.8	Max 30% for Aggregates to be used in concrete for wearing Surface, In case Aggregate Crushing Value Exceeds 30% then the test for ten percent fines should be conducted for Aggregates to be used in concrete other than for wearing Surface.
8	Aggregate Impact Value(%)	23.2	30% for Aggregates to be used in concrete for wearing Surface, 45% for Aggregates to be used in concrete other than for wearing Surface.

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Harshitha



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Quality Manager

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4, 7TH MAIN MALLESWARAM, BANGALORE -3

Certificate No.: T-4358

TEST REPORT OF FINE AGGREGATE

Lab ID : CP-2017-02-04-01 Date: 09-02-2017

Customer : Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Bangalore.

Address : Byatarayanapura Sub Division, BBMP, Bangalore.

Project Name : Improvements to Roads and Drains at Hemanna Layout, Kogilu in Ward No.05, Byatarayanapura Sub Division.

Agency : Sri.Gopi Reddy, No:03, first cross, first main, Ramachandrappa layout, Arebic college post, erannapalya, Bangalore - 560045

Customer's Reference : EE/BTP/BBMP/E-PMT/201/2015-16

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 04-02-2017

Sample ID No : 2017-02-04-01-03

Sample Type : Fine Aggregate

Reference to BIS codes : IS 383 : 2016 (Specification for Coarse and fine Aggregates)
IS: 2386 :1963(Part - 1, 3) RA2012
IS 2386 Part 1: Particle Size and Shape
IS 2386 Part 3: Specific gravity, Density, Voids, Water Absorption

Date of test : 04-02-2017

Total weight taken : 1000 grams

Sl.no	Sieve Size	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS 383:2016			
						Grading Zone I	Grading Zone II	Grading Zone III	Grading Zone IV
1	10 mm	0	0	0	100	100	100	100	100
2	4.75 mm	84	84	8.4	91.6	90-100	90-100	90-100	95-100
3	2.36 mm	104	188	18.8	81.2	60-95	75-100	85-100	95-100
4	1.18 mm	144	332	33.2	66.8	30-70	55-90	75-100	90-100
5	600 micron	230	562	56.2	43.8	15-34	35-59	60-79	80-100
6	300 micron	220	782	78.2	21.8	5-20	8-30	12-40	15-50
7	150 micron	120	902	90.2	9.8	0-10	0-10	0-10	0-15
8	Pan	98	1000	100	0	---	---	---	---

Result : The tested Sample Conforms to Grading Zone II

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4, 7TH MAIN MALLESWARAM, BANGALORE -3



Certificate No.: T- 4358

TEST REPORT OF FINE AGGREGATE

Lab ID : CP-2017-02-04-01
Sample ID No : 2017-02-04-01-03

Date: 09-02-2017

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS 383:2016
1	Water Absorption(%)	1.76	—
2	Specific Gravity	2.58	—
3	Material finer than 75 micron	5.45	Uncrushed fine Aggregate Max 3%, Crushed Fine aggregate Max 15%, Mixed Fine aggregate Max 12%, Manufactured Fine aggregate Max 10%

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Prepared by
Harshitha

FOR CIVIL Pro.

R. Karthik Rechan

R KARTHIK RECHAN
Authorized Signatory
Quality Manager



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4, 7TH MAIN MALLESWARAM, BANGALORE -3

Certificate No.: T-4358

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : CP-2017-03-13-05 Date: 16-03-2017

Customer : Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Bangalore.

Address : Byatarayanapura Sub Division, BBMP, Bangalore.

Project Name : Improvements to Roads and Drains at Hemanna Layout, Kogilu in Ward No.05, Byatarayanapura Sub Division.

Agency : Sri.Gopi Reddy, No:03, first cross, first main, Ramachandrappa layout, Arebic college post, erannapalya, Bangalore - 560045

Customer's Reference : EE/BTP/BBMP/E-PMT/201/2015-16

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 13-03-2017

Sample ID No : 2017-03-13-05-01

Customer ID : Drain Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 15/03/2017

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm ²)	(N/mm ²)
1	Drain Concrete	M20	08/03/2017	15/03/2017	150.17 X 150.19 X 150.16	22554	8.289	439.8	19.5	19.2
2	Drain Concrete	M20	08/03/2017	15/03/2017	150.32 X 150.22 X 150.28	22581	8.320	435.8	19.3	
3	Drain Concrete	M20	08/03/2017	15/03/2017	150.22 X 150.43 X 150.53	22598	8.333	427.1	18.9	

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Harsitha

AS w aut No 5
Def. 15/03/17
22.08/17

FOR CIVIL Pro.

R. Karthik

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Certificate No.: T- 4358

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : CP-2017-03-13-05 Date: 06-04-2017

Customer : Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Bangalore.

Address : Byatarayanapura Sub Division, BBMP, Bangalore.

Project Name : Improvements to Roads and Drains at Hemanna Layout, Kogilu in Ward No.05, Byatarayanapura Sub Division.

Agency : Sri.Gopi Reddy, No:03, first cross, first main, Ramachandrappa layout, Arebic college post, erannapalya, Bangalore - 560045

Customer's Reference : EE/BTP/BBMP/E-PMT/201/2015-16

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 13-03-2017

Sample ID No : 2017-03-13-05-02

Customer ID : Drain Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 05/04/2017

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm ²)	(N/mm ²)
1	Drain Concrete	M20	08/03/2017	05/04/2017	150.23 X 150.19 X 150.24	22563	8.389	530.2	23.5	23.4
2	Drain Concrete	M20	08/03/2017	05/04/2017	150.32 X 150.52 X 150.11	22626	8.420	527.2	23.3	
3	Drain Concrete	M20	08/03/2017	05/04/2017	150.19 X 150.23 X 150.32	22563	8.433	528.0	23.4	

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4, 7TH MAIN MALLESWARAM, BANGALORE -3

Certificate No.: T-4358

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : CP-2017-03-17-06 Date: 21-03-2017

Customer : Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Bangalore.

Address : Byatarayanapura Sub Division, BBMP, Bangalore.

Project Name : Improvements to Roads and Drains at Hemanna Layout, Kogilu in Ward No.05, Byatarayanapura Sub Division.

Agency : Sri.Gopi Reddy, No:03, first cross, first main, Ramachandrappa layout, Arebic college post, erannapalya, Bangalore - 560045

Customer's Reference : EE/BTP/BBMP/E-PMT/201/2015-16

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 17-03-2017

Sample ID No : 2017-03-17-06-01

Customer ID : Drain Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 20/03/2017

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm ²)	(N/mm ²)
1	Drain Concrete	M20	13/03/2017	20/03/2017	150.21 X 150.29 X 150.11	22575	8.489	417.6	18.5	19.1
2	Drain Concrete	M20	13/03/2017	20/03/2017	150.21 X 150.30 X 150.28	22577	8.420	435.7	19.3	
3	Drain Concrete	M20	13/03/2017	20/03/2017	150.32 X 150.11 X 150.53	22565	8.323	440.0	19.5	

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4, 7TH MAIN MALLESWARAM, BANGALORE -3

Certificate No.: T- 4358

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : CP-2017-03-17-06 Date: 11-04-2017

Customer : Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Bangalore.

Address : Byatarayanapura Sub Division, BBMP, Bangalore.

Project Name : Improvements to Roads and Drains at Hemanna Layout, Kogilu in Ward No.05, Byatarayanapura Sub Division.

Agency : Sri.Gopi Reddy, No:03, first cross, first main, Ramachandrappa layout, Arebic college post, erannapalya, Bangalore - 560045

Customer's Reference : EE/BTP/BBMP/E-PMT/201/2015-16

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 17-03-2017

Sample ID No : 2017-03-17-06-02

Customer ID : Drain Concrete

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 10/04/2017

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm ²)	(N/mm ²)
1	Drain Concrete	M20	13/03/2017	10/04/2017	150.31 X 150.49 X 150.11	22620	8.289	554.2	24.5	24.2
2	Drain Concrete	M20	13/03/2017	10/04/2017	150.21 X 150.20 X 150.28	22562	8.320	525.7	23.3	
3	Drain Concrete	M20	13/03/2017	10/04/2017	150.32 X 150.41 X 150.33	22610	8.423	558.5	24.7	

Note:

The results pertain to the samples received and tested.

All information furnished by Customer/Representative

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Samples will be disposed after 30 days from the date of issue of test certificate

Prepared by
Harsitha

As per NO 5
Date 11-4-17
20.25/17

FOR CIVIL Pro.

R KARTHIK RECHAN

Authorized Signatory
Quality Manager



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4, 7TH MAIN MALLESWARAM, BANGALORE -3

Certificate No.: T-4358

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : CP-2017-03-30-03 Date: 22-04-2017

Customer : Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Bangalore.

Address : Byatarayanapura Sub Division, BBMP, Bangalore.

Project Name : Improvements to Roads and Drains at Hemanna Layout, Kogilu in Ward No.05, Byatarayanapura Sub Division.

Agency : Sri.Gopi Reddy, No:03, first cross, first main, Ramachandrappa layout, Arebic college post, erannapalya, Bangalore - 560045

Customer's Reference : EE/BTP/BBMP/E-PMT/201/2015-16

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 30-03-2017

Sample ID No : 2017-03-30-03-02

Customer ID : PCC

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 22/04/2017

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm ²)	(N/mm ²)
1	PCC	M20	25/03/2017	22/04/2017	150.15 X 150.19 X 150.30	22551	8.221	543.5	24.1	23.9
2	PCC	M20	25/03/2017	22/04/2017	150.21 X 150.29 X 150.20	22575	8.330	539.5	23.9	
3	PCC	M20	25/03/2017	22/04/2017	150.21 X 150.32 X 150.31	22580	8.421	535.1	23.7	

Note:

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Prepared by
Harsitha

AS Ward No 5
HE 1008A
22.04.2017

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R. Karthik Rechan

R KARTHIK RECHAN
Authorized Signatory
Quality Manager



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4, 7TH MAIN MALLESWARAM, BANGALORE -3

Certificate No.: T-4358

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : CP-2017-03-30-03 Date: 01-04-2017
Customer : Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Bangalore.
Address : Byatarayanapura Sub Division, BBMP, Bangalore.
Project Name : Improvements to Roads and Drains at Hemanna Layout, Kogilu in Ward No.05, Byatarayanapura Sub Division.
Agency : Sri.Gopi Reddy, No:03, first cross, first main, Ramachandrappa layout, Arebic college post, erannapalya, Bangalore - 560045
Customer's Reference : EE/BTP/BBMP/E-PMT/201/2015-16
Source of Sample : Sample supplied by Agency
Sample Condition : Satisfactory
Date of Receipt : 30-03-2017
Sample ID No : 2017-03-30-03-01
Customer ID : PCC
Sample Type /Size : 150X150X150 mm
Sample grade/Age : M20 / 7 Days Compressive Strength
Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5
Date of test : 01/04/2017

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen	Cross sectional area	Weight of the sample	Failure Load	Compressive strength	Average Compressive Strength
					(mm)	(Sq.mm)	(kg)	(KN)	(N/mm ²)	(N/mm ²)
1	PCC	M20	25/03/2017	01/04/2017	150.21 X 150.32 X 150.30	22580	8.321	431.3	19.1	19.5
2	PCC	M20	25/03/2017	01/04/2017	150.21 X 150.54 X 150.55	22613	8.530	440.9	19.5	
3	PCC	M20	25/03/2017	01/04/2017	150.21 X 150.32 X 150.11	22580	8.421	449.3	19.9	

Note:

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Prepared by
Harsitha

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R. Karthik Rechan

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4, 7TH MAIN MALLESWARAM, BANGALORE -3

TEST RESULTS OF STEEL

Lab ID : CP-2017-02-04-01 Date: 09-02-2017
Customer : Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Bangalore.
Address : Byatarayanapura Sub Division, BBMP, Bangalore.
Project Name : Improvements to Roads and Drains at Hemanna Layout, Kogilu in Ward No.05, Byatarayanapura Sub Division.
Agency : Sri.Gopi Reddy, No:03, first cross, first main, Ramachandrappa layout, Arebic college post, erannapalya, Bangalore - 560045
Customer's Reference : EE/BTP/BBMP/E-PMT/201/2015-16
Source of Sample : Sample supplied by Agency
Sample Condition : Satisfactory
Date of Receipt : 04-02-2017
Sample ID No : 2017-02-04-01-04
Sample Type : Indus Fe 500
Reference to BIS codes : IS 1786-2008
Date of test: : 06-02-2017

Sl.No	Identification of sample	Grade of the sample	Diameter of the steel bar	Weight of the sample (kg/m)	Yield stress (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)
1	Indus Fe 500	Fe500	8mm	0.392	526	610	19.0%

Sl.No	Identification of sample	Grade of the sample	Diameter of the steel bar	Bend test	Rebend test
1	Indus Fe 500	Fe500	8mm	Satisfactory	Satisfactory

Note:

The results pertain to the samples received and tested.

All information furnished by Customer/Representative

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Prepared By:
Harshitha

AS WARD No 5
Kogilu
20.2.2017



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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

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4, 7TH MAIN MALLESWARAM, BANGALORE -3

TEST RESULTS OF STEEL

Lab ID : CP-2017-02-04-01 Date: 09-02-2017
Customer : Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Bangalore.
Address : Byatarayanapura Sub Division, BBMP, Bangalore.
Project Name : Improvements to Roads and Drains at Hemanna Layout, Kogilu in Ward No.05, Byatarayanapura Sub Division.
Agency : Sri.Gopi Reddy, No:03, first cross, first main, Ramachandrappa layout, Arebic college post, erannapalya, Bangalore - 560045
Customer's Reference : EE/BTP/BBMP/E-PMT/201/2015-16
Source of Sample : Sample supplied by Agency
Sample Condition : Satisfactory
Date of Receipt : 04-02-2017
Sample ID No : 2017-02-04-01-05
Sample Type : Indus Fe 500
Reference to BIS codes : IS 1786-2008
Date of test: : 06-02-2017

Sl.No	Identification of sample	Grade of the sample	Diameter of the steel bar	Weight of the sample (kg/m)	Yield stress (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)
1	Indus Fe 500	Fe500	10mm	0.612	540	638	19.0%

Sl.No	Identification of sample	Grade of the sample	Diameter of the steel bar	Bend test	Rebend test
1	Indus Fe 500	Fe500	10mm	Satisfactory	Satisfactory

Note:

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Prepared By:
Harshitha

AKS ward nos
20.12.2017
20.12.2017



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P. Karthik Rechan
R KARTHIK RECHAN
Authorized Signatory
Quality Manager

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4, 7TH MAIN MALLESWARAM, BANGALORE -3

TEST REPORT OF PRECAST COVER SLAB

Lab ID : CP-2017-03-04-03 Date: 10-03-2017

Customer : Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Bangalore.

Address : Byatarayanapura Sub Division, BBMP, Bangalore.

Project Name : Improvements to Roads and Drains at Hemanna Layout, Kogilu in Ward No.05, Byatarayanapura Sub Division.

Agency : Sri.Gopi Reddy, No:03, first cross, first main, Ramachandrappa layout, Arebic college post, erannapalya, Bangalore - 560045

Customer's Reference : EE/BTP/BBMP/E-PMT/201/2015-16

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 04-03-2017

Sample ID No : 2017-03-04-03-01

Sample Type /Size : Precast Cover Slab

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete

Date of test : 04/03/2017

Sl. No.	Identification Mark	Diameter of the core	Height of the core	Weight of the core	Area	Failure Load	Core Compressive strength	Corrected Cylinder Compressive strength	Equivalent Cube Compressive strength
		(mm)	(mm)	(mm)	(Sq.mm)	(KN)	(N/mm ²)	(N/mm ²)	(N/mm ²)
1	Cover Slab-1	75.51	100.42	1.116	4477	91.9	20.5	19.1	23.9
2	Cover Slab-2	75.49	100.45	1.122	4475	93.3	20.8	19.4	24.2
3	Cover Slab-3	75.50	100.49	1.118	4476	89.5	20.0	18.6	23.2

Note:

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Samples will be disposed after 30 days from the date of issue of test certificate

Prepared by
Harshitha

Handwritten signature and date: 10/03/2017

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Handwritten signature of R. Karthik Rechan

R KARTHIK RECHAN
Authorized Signatory
Quality Manager



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4, 7TH MAIN MALLESWARAM, BANGALORE -3

TEST RESULTS OF GRADATION FOR WMM

Lab ID : CP-RW-2017-03-28-04 Date: 30-03-17
Customer : Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Bangalore.
Address : Byatarayanapura Sub Division, BBMP, Bangalore.
Project Name : Improvements to Roads and Drains at Hemmanna Layout, Kogilu in Ward No. 05, Byatarayanapura Sub Division.
Agency : Sri. Gopi Reddy, No.03, First cross, First Main, Ramachandrappa Layout, Arebic College post, erannapalya Bangalore-560 045.
Customer Reference : EE/BTP/BBMP/E-PMT/201/2015-16
Source of Sample : Sample supplied by Agency
Sample Condition : Satisfactory
Date of Receipt : 28-03-17
Sample ID No : 2017-03-28-04/01
Type of Mix : WMM (Wet Mix Macadam)
Date of test : 28-03-17
Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0	100	100
45	286	286	2.6	97.4	95-100
22.4	2372	2658	24.2	75.8	60-80
11.2	2269	4927	44.8	55.2	40-60
4.75	2173	7100	64.5	35.5	25-40
2.36	1783	8883	80.8	19.2	15-30
0.6	428	9311	84.6	15.4	8-22
0.075	1236	10547	95.9	4.1	0-5

Note:-

The results pertain to the samples received and tested.

All information furnished by Customer/Representative

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Prepared By:
Harshitha

ALL WARD NOS
M.F. 8.2.18
20.2.2018

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Authorized Signatory
Quality Manager

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4, 7TH MAIN MALLESWARAM, BANGALORE -3

Certificate No.: T- 4358

TEST REPORT OF AGGEGRATE IMPACT VALUE

IS: 2386 Part IV

Lab ID : CP-RW-2017-03-28-04 Date: 30-03-17
Customer : Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Bangalore.
Address : Byatarayanapura Sub Division, BBMP, Bangalore.
Project Name : Imprvements to Roads and Drains at Hemmanna Layout, Kogilu in Ward No. 05, Byatarayanapura Sub Division.
Agency : Sri. Gopi Reddy, No.03, First cross, First Main, Ramachandrappa Layout, Arebic College post, erannapalya Bangalore-560 045.
Customer Reference : EE/BTP/BBMP/E-PMT/201/2015-16
Source of Sample : Sample supplied by Agency
Sample Condition : Satisfactory
Date of Receipt : 28-03-17
Sample ID No : 2017-03-28-04/01
Type of Mix : Coarse Aggregate for WMM (Wet Mix Macadam)
Date of test : 28-03-17

Sl.No	Particulars of observations	Index	TEST 1	TEST 2
1	Total weight of the surface dry sample sample (passing 12.5 mm and retained on 10mm sieve)	A	312.1	312.7
2	Weight of fraction passing 2.36mm sieve After giving 15 blows	B	62.7	60.6
3	weight of fraction retained 2.36mm sieve After giving 15 blows	C	249.1	251.4
4	Total weight of (B+C) is less than the initial weight (Weight A) by more than one gram the result shall be discarded and a fresh test made.	A-(B+C)	0.3	0.7
5	Aggregate impact value	(B/A)*100	20.1	19.4
6	Aggregate impact value (Mean of two tests)	Percentage	19.7	

Note:-

The results pertain to the samples received and tested.

All information furnished by Customer/Representative

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Prepared By:

Harshitha

AS per No 5
28-03-17
20-03-17

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4, 7TH MAIN MALLESWARAM, BANGALORE -3

Certificate No.: T- 4358

**DETERMINATION OF FLAKINESS INDEX AND ELONGATION INDEX OF
COARSE AGGREGATE (IS 2386 (Part 1) 1963 (RA 2011)**

Lab ID : CP-RW-2017-04-12-02 Date: 15-04-17
Customer : Assistant Executive Engineer, Byatarayanapura Sub Division,
BBMP, Bangalore.
Address : Byatarayanapura Sub Division, BBMP, Bangalore.
Project Name : Imprvemnts to Roads and Drains at Hemmanna Layout,
Kogilu in Ward No. 05, Byatarayanapura Sub Division.
Agency : Sri. Gopi Reddy, No.03, First cross, First Main,
Ramachandrappa Layout, Arebic College post, erannapalya
Bangalore-560 045.
Customer Reference : EE/BTP/BBMP/E-PMT/201/2015-16
Source of Sample : Sample supplied by Agency
Sample Condition : Satisfactory
Date of Receipt : 12-04-17
Sample ID No : 2017-04-12-02/01
Type of Mix : Coarse Aggregate for SDBC (Semi Dense Bituminous Concrete)
Date of test : 12-04-17

Result:

Flakiness Index	11.9%
Elongation Index	10.1%
Combined Flakiness & Elongation Index for SDBC	22.0%

Comments:

Maximum allowable Flakiness & Elongation Index For SDBC is 30 %

Note:-

The results pertain to the samples received and tested.

All information furnished by Customer/Representative

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Prepared By:
Harshitha

*AKS ward No.5
20.02.17
20.02.17*



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R. Karthik Rechan

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Quality Manager

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4, 7TH MAIN MALLESWARAM, BANGALORE -3

Certificate No.: T- 4358

DETERMINATION OF FLAKINESS INDEX AND ELONGATION INDEX OF COARSE AGGREGATE (IS 2386 (Part 1) 1963 (RA 2007))

Lab ID : CP-RW-2017-03-28-04 Date: 30-03-17
 Customer : Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Bangalore.
 Address : Byatarayanapura Sub Division, BBMP, Bangalore.
 Project Name : Improvements to Roads and Drains at Hemmanna Layout, Kogilu in Ward No. 05, Byatarayanapura Sub Division.
 Agency : Sri. Gopi Reddy, No.03, First cross, First Main, Ramachandrappa Layout, Arebic College post, erannapalya Bangalore-560 045.
 Customer Reference : EE/BTP/BBMP/E-PMT/201/2015-16
 Source of Sample : Sample supplied by Agency
 Sample Condition : Satisfactory
 Date of Receipt : 28-03-17
 Sample ID No : 2017-03-28-04/01
 Type of Mix : Coarse Aggregate for WMM (Wet Mix Macadam)
 Date of test : 28-03-17

Result:

Index	Percentage of Flakiness and Elongation Index	Secified limits as per MORTH specification table 400-12
Flakiness Index	13.2%	Combined Flakiness & Elongation Index for WMM is Maximum 35%
Elongation Index	10.8%	
Combined Flakiness and Elongation Index for WMM	24.0%	

Note:-

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Prepared By:
Harshitha

AS WARD NO 5
Kogilu
W. 28-03-17



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R. Karthik Rechan

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4, 7TH MAIN MALLESWARAM, BANGALORE -3

Certificate No.: T- 4358

TESTS RESULTS ON AGGREGATE IMPACT VALUE (IS:2386 Part IV)

Lab ID : CP-RW-2017-04-12-02 **Date:** 15-04-17
Customer : Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Bangalore.
Address : Byatarayanapura Sub Division, BBMP, Bangalore.
Project Name : Improvements to Roads and Drains at Hemmanna Layout, Kogilu in Ward No. 05, Byatarayanapura Sub Division.
Agency : Sri. Gopi Reddy, No.03, First cross, First Main, Ramachandrapa Layout, Arebic College post, erannapalya Bangalore-560 045.
Customer Reference : EE/BTP/BBMP/E-PMT/201/2015-16
Source of Sample : Sample supplied by Agency
Sample Condition : Satisfactory
Date of Receipt : 12-04-17
Sample ID No : 2017-04-12-02/01
Type of Mix : Coarse Aggregate for SDBC (Semi Dense Bituminous Concrete)
Date of test : 13-04-17

Sl.No	Particulars of observations	Index	TEST 1	TEST 2
1	Total weight of the surface dry sample sample (passing 12.5 mm and retained on 10mm sieve)	A	301.7	301.5
2	Weight of fraction passing 2.36mm sieve After giving 15 blows	B	62.8	61.1
3	weight of fraction retained 2.36mm sieve After giving 15 blows	C	238.6	240.1
4	Total weight of (B+C) is less than the initial weight (Weight A) by more than one gram the result shall be discarded and a fresh test made.	A-(B+C)	0.3	0.3
5	Aggregate impact value	(B/A)*100	20.8	20.3
6	Aggregate impact value (Mean of two tests)		20.5	

Note:-

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All information furnished by Customer/Representative

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Prepared By:
Harshitha

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4, 7TH MAIN MALLESWARAM, BANGALORE -3

Certificate No.: T- 4358

SPECIFIC GRAVITY AND WATER ABSORPTION TEST

IS:2386 (Part III)

Lab ID : CP-RW-2017-04-12-02 Date: 15-04-17
Customer : Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Bangalore.
Address : Byatarayanapura Sub Division, BBMP, Bangalore.
Project Name : Improvements to Roads and Drains at Hemmanna Layout, Kogilu in Ward No. 05, Byatarayanapura Sub Division.
Agency : Sri. Gopi Reddy, No.03, First cross, First Main, Ramachandrappa Layout, Arebic College post, erannapalya Bangalore-560 045.
Customer Reference : EE/BTP/BBMP/E-PMT/201/2015-16
Source of Sample : Sample supplied by Agency
Sample Condition : Satisfactory
Date of Receipt : 12-04-17
Sample ID No : 2017-04-12-02/01
Type of Mix : Coarse Aggregate for SDBC (Semi Dense Bituminous concrete)
Date of test : 12-04-17

Sl.No	Details of Observations	Index	Unit	Test 1	Test 2	Mean Value
1	Weight of Wet aggregates + Basket suspended in water	A1	grams	2290	2248	
2	Weight of Empty Basket suspended in water	A2	grams	791	791	
3	Weight of Aggregates in water	A=A1-A2	grams	1499	1457	
4	Weight of Saturated Surface Dry aggregate	B	grams	2419	2342	
5	Weight of oven dried aggregate	C	grams	2414	2338	
6	Specific gravity	C/(B-A)		2.62	2.64	2.63
7	Apparent Specific gravity	C/(C-A)		2.64	2.65	2.65
8	Water absorption	100*(B-C)/C	Percent	0.21	0.17	0.19

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AKS ward no. 5
2017-04-12-02/01
2017-04-12-02/01

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4, 7TH MAIN MALLESWARAM, BANGALORE -3

TEST REPORT OF AGGREGATE STRIPPING VALUE OF ROAD AGGRGATE (IS:6241)

Lab ID : CP-RW-2017-04-12-02 Date: 15-04-17
Customer : Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Bangalore.
Address : Byatarayanapura Sub Division, BBMP, Bangalore.
Project Name : Imprvements to Roads and Drains at Hemmanna Layout, Kogilu in Ward No. 05, Byatarayanapura Sub Division.
Agency : Sri. Gopi Reddy, No.03, First cross, First Main, Ramachandrappa Layout, Arebic College post, erannapalya Bangalore-560 045.
Customer Reference : EE/BTP/BBMP/E-PMT/201/2015-16
Source of Sample : Sample supplied by Agency
Sample Condition : Satisfactory
Date of Receipt : 12-04-17
Sample ID No : 2017-04-12-02/01
Type of Mix : SDBC (Semi Dense Bituminous Concrete)
Date of test : 12-04-17

Type of Binder : 60/70
% of Binder Used : 5.0%
Weight of Aggregate : 200.0 gm
Weight of Binder : 10.0 gm
Temperature of water bath : 40°C

No of test	Retained Stripping Percentage	Stripping Percentage	Average Retained Stripping Percentage	Secified limits as per MORTH specification table 500-8
1	98.5	1.5	98.3	Minimum Retained Coating 95%
2	98.0	2.0		
3	98.5	1.5		

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As per No. 5
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20.04.17



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4, 7TH MAIN MALLESWARAM, BANGALORE -3

TESTS RESULTS ON STABILITY OF MIX

Lab ID : CP-RW-2017-04-12-02 Date: 15-04-17
Customer : Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Bangalore.
Address : Byatarayanapura Sub Division, BBMP, Bangalore.
Project Name : Improvements to Roads and Drains at Hemmanna Layout, Kogilu in Ward No. 05, Byatarayanapura Sub Division.
Agency : Sri. Gopi Reddy, No.03, First cross, First Main, Ramachandrappa Layout, Arebic College post, erannapalya Bangalore-560 045.
Customer Reference : EE/BTP/BBMP/E-PMT/201/2015-16
Source of Sample : Sample supplied by Agency
Sample Condition : Satisfactory
Date of Receipt : 12-04-17
Sample ID No : 2017-04-12-02/01
Type of Mix : SDBC (Semi Dense Bituminous Concrete)
Date of test : 12-04-17

The results of the tests conducted on the Semi Dense Bituminous Concrete mix sample are as follow				
Sl.No	Particulars of observations	TEST 1	TEST 2	Secified limits as per MORTH specification table 500-16
1	Marshal Stability at 60°C, KN	10.14	10.51	8.2KN(min)
2	Marshal flow at 60°C, mm	3.98	3.56	2-4
3	Percent air Voids	4.51	4.72	3-5
4	Percent Voids in mineral Aggregate(VMA %)	14.33	14.65	13-15
5	Percent Voids filled with Bitumen(VFB %)	72.26	73.1	65-75
6	Density, g/cc	2.26	2.24	-

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4, 7TH MAIN MALLESWARAM, BANGALORE -3

**TEST RESULTS OF GRADATION FOR SDBC
IS 2386 (Part 1) 1963 (RA 2007)**

Lab ID : CP-RW-2017-04-12-02 Date: 15-04-17
Customer : Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Bangalore.
Address : Byatarayanapura Sub Division, BBMP, Bangalore.
Project Name : Improvements to Roads and Drains at Hemmanna Layout, Kogilu in Ward No. 05, Byatarayanapura Sub Division.
Agency : Sri. Gopi Reddy, No.03, First cross, First Main, Ramachandrappa Layout, Arebic College post, erannapalya Bangalore-560 045.
Customer Reference : EE/BTP/BBMP/E-PMT/201/2015-16
Source of Sample : Sample supplied by the Agency
Sample Condition : Satisfactory
Date of Receipt : 12-04-17
Sample ID No : 2017-04-12-02/01
Type of Mix : SDBC-Plant (Semi Dense Bituminous Concrete)
Date of test : 12-04-17
Oven Dry Weight(gm) : 5000

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-15(grading-2)
13.2	0	0	0	100	100
9.5	277	277	5.5	94.5	90-100
4.75	2373	2650	53.0	47.0	35-51
2.36	949	3599	72.0	28.0	24-39
1.18	487	4086	81.7	18.3	15-30
0.3	388	4474	89.5	10.5	9-19
0.075	177	4651	93.0	7.0	3-8
PAN	349	5000	100	0	0

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ARE Ward No 5
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20.25.2017

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4, 7TH MAIN MALLESWARAM, BANGALORE -3

**TEST RESULTS OF BITUMEN CONTENT FOR SDBC
(AS per IRC:SP:-11-1984)**

Lab ID : CP-RW-2017-04-27-02 Date: 29-04-17
Customer : Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Bangalore.
Address : Byatarayanapura Sub Division, BBMP, Bangalore.
Project Name : Imprvemts to Roads and Drains at Hemmanna Layout, Kogilu in Ward No. 05, Byatarayanapura Sub Division.
Agency : Sri. Gopi Reddy, No.03, First cross, First Main, Ramachandrappa Layout, Arebic College post, erannapalya Bangalore-560 045.
Customer Reference : EE/BTP/BBMP/E-PMT/201/2015-16
Source of Sample : Sample supplied by Agency
Date of Receipt : 27-04-17
Sample ID No : 2017-04-27-02/02
Type of Mix : SDBC (Semi Dense Bituminous Concrete)
Date of test : 27-04-17

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	A	502	501
2	Weight of the sample After extraction	B	478	477
3	Bitumen percentage	$\frac{A-B}{A} \times 100$	4.78	4.79
4	Average percentage	%	4.79	

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29.04.17

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4, 7TH MAIN MALLESWARAM, BANGALORE -3

Lab ID : CP-RW-2017-04-27-02

Date: 29-04-17

Sample ID No : 2017-04-27-02/02

AFTER EXTRACTION (Trail-1)

Oven Dry Weight(gm) : 478

IS Sieve Size(mm)	Weight Retained(gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Secified limits as per MORTH specification table 500-15(grading-2)
13.2	0	0	0	100.0	100
9.5	31	31	6.5	93.5	90-100
4.75	213	244	51.0	49.0	35-51
2.36	63	307	64.2	35.8	24-39
1.18	39	346	72.4	27.6	15-30
0.3	71	417	87.2	12.8	9-19
0.075	34	451	94.4	5.6	3-8

AFTER EXTRACTION (Trail-2)

Oven Dry Weight(gm) : 477

IS Sieve Size(mm)	Weight Retained(gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Secified limits as per MORTH specification table 500-15(grading-2)
13.2	0	0	0	100.0	100
9.5	29	29	6.1	93.9	90-100
4.75	215	244	51.2	48.8	35-51
2.36	62	306	64.2	35.8	24-39
1.18	41	347	72.7	27.3	15-30
0.3	66	413	86.6	13.4	9-19
0.075	32	445	93.3	6.7	3-8

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AKF 8-5-8A
Ward No

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**TEST RESULTS OF BITUMEN CONTENT FOR SDBC
(AS per IRC:SP:-11-1984)**

Lab ID : CP-RW-2017-04-27-02 Date: 29-04-17
Customer : Assistant Executive Engineer, Byatarayanapura Sub Division, BBMP, Bangalore.
Address : Byatarayanapura Sub Division, BBMP, Bangalore.
Project Name : Improvements to Roads and Drains at Hemmanna Layout, Kogilu in Ward No. 05, Byatarayanapura Sub Division.
Agency : Sri. Gopi Reddy, No.03, First cross, First Main, Ramachandrappa Layout, Arebic College post, erannapalya Bangalore-560 045.
Customer Reference : EE/BTP/BBMP/E-PMT/201/2015-16
Source of Sample : Sample supplied by Agency
Date of Receipt : 27-04-17
Sample ID No : 2017-04-27-02/01
Type of Mix : SDBC (Semi Dense Bituminous Concrete)
Date of test : 27-04-17

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	A	502	501
2	Weight of the sample After extraction	B	478	477
3	Bitumen percentage	$\frac{A-B}{A} \times 100$	4.78	4.79
4	Average percentage	%	4.79	

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*As per ward nos
2017-04-27-02/01
29/04/17*

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4, 7TH MAIN MALLESWARAM, BANGALORE -3

Lab ID : CP-RW-2017-04-27-02

Date: 29-04-17

Sample ID No : 2017-04-27-02/01

AFTER EXTRACTION (Trail-1)

Oven Dry Weight(gm) : 478

IS Sieve Size(mm)	Weight Retained(gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Secified limits as per MORTH specification table 500-15(grading-2)
13.2	0	0	0	100.0	100
9.5	32	32	6.7	93.3	90-100
4.75	223	255	53.3	46.7	35-51
2.36	77	332	69.5	30.5	24-39
1.18	37	369	77.2	22.8	15-30
0.3	75	444	92.9	7.1	9-19
0.075	16	460	96.2	3.8	3-8

AFTER EXTRACTION (Trail-2)

Oven Dry Weight(gm) : 477

IS Sieve Size(mm)	Weight Retained(gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Secified limits as per MORTH specification table 500-15(grading-2)
13.2	0	0	0	100.0	100
9.5	37	37	7.8	92.2	90-100
4.75	232	269	56.4	43.6	35-51
2.36	79	348	73.0	27.0	24-39
1.18	35	383	80.3	19.7	15-30
0.3	47	430	90.1	9.9	9-19
0.075	14	444	93.1	6.9	3-8

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10.07.17

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